

Novelis Inc.
1 LAPPAN'S LANE
P.O. BOX 2000
KINGSTON, ONTARIO, CANADA K7L4Z5

CERTIFICATION OF PROPERTIES AND
CHEMICAL ANALYSIS

SOLD TO:
MANDEL METALS INC
11400 ADDISON STREET

SHIP TO:
MANDEL METALS INC
11400 ADDISON STREET

FRANKLIN PARK IL
60131

FRANKLIN PARK IL
60131

PRINT DATE:
2009/04/17

CUST PO: 02-11832

LOAD: HZ84

ALLOY: 6061

PACK: 52644221

TEMPER: T6

CUST PART #:

COIL: K05408A

GAUGE: 0.0630 in

SALES ORDER: 66515340-0010

NET WT: 9237 lbs

WIDTH: 48.000 in

MECHANICAL SPECIFICATIONS: AMS-QQ-A-250/11-97 ASTM B209-02 AMS4027M
GAUGE LENGTH = 2.00 in

I certify that the materials detailed herein have been tested and that
documentary evidence of the test or release certificate is on file.

Per

Process Leader

Location: FRONT END		UOM	TEMPER	TEST DATE
UTS	T:45.95	ksi	T6	17-APR-2009
YTS	T:38.17	ksi	T6	17-APR-2009
Elongation	T:13	%	T6	17-APR-2009
Tensile Thickness	T:0.0604	in	T6	17-APR-2009

Location: BACK END		UOM	TEMPER	TEST DATE
UTS	T:44.08	ksi	T6	17-APR-2009
YTS	T:37.08	ksi	T6	17-APR-2009
Elongation	T:12	%	T6	17-APR-2009
Tensile Thickness	T:0.0609	in	T6	17-APR-2009

Chemistry
***** LAYER: 01 *****
Al 97.6900 Si 0.5500 Fe 0.4600 Cu 0.2200 Mn 0.0100 Mg 0.8800 Cr 0.1700 Ni 0.0000 Zn 0.0100
Ti 0.0100 Be 0.0000 Pb 0.0000
EACH: 0.0000 TOTAL: 0.0000

20040709



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO11060

Purchase Order Date 1/07/10

PO Print Date 1/07/10

Page Number 2 of 2

Order From :

VC-MAG002

MAGNA STAINLESS
5775 RUE KIERAN
ST LAURENT, QC H4S 0A3
CA

Contact Name

Vendor Phone 800 363 6646

Vendor Fax 514 339 1105

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

ALUMINUM SHEET
AS PER QQ-A-250/11 OR AMS-QQ-A-
250/11 OR AMS 4025
AMS 4027 OR ASTM B209

5 M6061T6S.063

6061-T6 .063 Sheet

1/11/10

256.00

Yours ppd

\$4,5312

\$1,159.99

Yes

sf

Special Inst:

MATERIAL SAME AS ABOVE

6 M2024T3S.080

2024-T3 .080 sheet

1/15/10

196.00

Yours ppd

\$10,9375

\$2,143.75

Yes

sf

Special Inst:

MATERIAL: 2024-T3 ALUMINUM
SHEET
AS PER QQ-A-250/4 OR AMS-QQ-
AA-250/4 OR
AMS 4037 OR ASTM B209

7 M7075T6B1.000X1.000

7075 T6 BAR 1.00 x1.00

1/15/10

12.00

Yours ppd

\$16,2500

\$195.00

Yes

f

Special Inst:

MATERIAL: 7075-T6/T651/T6511/T62
ALUMINUM BAR PER AMS-QQ-A-
225/9 OR AMS 4122/4123/4186/4187
OR
PER AMS-QQ-A-200/11

8 M304TS0.750W.049

304 SQ Tube
.75x.75x.049W

1/15/10

100.00

Yours ppd

\$3,2500

\$325.00

Yes

f

Special Inst:

MATERIAL: 304 SEAMLESS
SQUARE TUBING NO MILL FINISH

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

PO Total:

\$4,831.66

Change Nbr: 2

Change Date: 1/07/10

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO11060

Purchase Order Date 1/07/10

PO Print Date 1/07/10

Page Number 1 of 2

Order From :

MAGNA STAINLESS
5775 RUE KIERAN
ST LAURENT, QC H4S 0A3
CA

VC-MAG002

FAKED
Edo

Contact Name

Vendor Phone 800 363 6646

Vendor Fax 514 339 1105

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms

Net 30

Currency

CAD

FOB

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

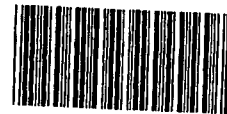
Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6R0.625	6061-T6 Round Bar .625"	1/15/10 Yes	40.00 f	Yours ppd	\$3.8000	\$152.00
		Special Inst: MATERIAL: 6061-T6/651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8/AMS 4117/4128/4115/4116 OR ASTM B211 OR ASTM B221					
2	M6061T6B00750X00.125	6061-T6 Bar .750 x .125	1/11/10 Yes	80.00 f	Yours ppd	\$0.2500	\$20.00
		Special Inst: MATERIAL SAME AS ABOVE					
3	M6061T6B2.000X01.250	6061-T6 Bar 2.00 x 1.25	1/11/10 Yes	24.00 f	Yours ppd	\$11.0800	\$265.92
		Special Inst: MATERIAL SAME AS ABOVE					
4	M6061T6S.125	6061-T6 .125 Sheet	1/11/10 Yes	96.00 sf	Yours ppd	\$5.9375	\$570.00
		Special Inst: MATERIAL: 6061-T6/T62					

1/07/10



Magna Stainless

5775 Kieran St, Saint-Laurent, Quebec H4S 0A3
Phone: (514) 339-1211 Watts: 1-800-363-6646 Fax: (514) 339-1105



PACKING LIST

Page 1 of 1 I021555

SOLD TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY
K6A 1K7
Contact: CHANTAL

HAWKESBURY
K6A 1K7
Ship Terms: PREPAID

SPECIAL INSTRUCTIONS



Currency	Sales Person	Customer Phone	Customer Fax	Customer PO	
CANADIAN DOLLARS	ERYCK BLAIS	(613) 632-5200	(613) 632-1053	PO11060	
Sales Order	Terms	Ship Via	Date Ordered	Date Required	Date Shipped
W023590	NET 30 DAYS	NIR:R-557065-1	01/07/10	01/11/10	01/11/10

Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
4		PC	ALUMINUM FLATS AFL 6061 T6 1/8" x 3/4" x R/L			
2		PC	AFL 6061 T6 1-1/4" x 2" x R/L 20' 9 LB / 4 PC	L026372	07C043	4
			20' 118 LB / 2 PC	L030399	46512	2
3		PC	ALUMINUM SHEET ASH 6061 T6 .125" x 48" x 96"			
6		PC	ASH 6061 T6 .063" x 48" x 144" 173 LB / 3 PC	L031565	329280101	3
			NO N/A MAT'L 261 LB / 6 PC	L025694	K05406A	6

Approx Weight: 561 LB

Per 10/10/11

Bundles: 1 Skids: 1

Received by: _____ Date: _____ Signature: _____

January 11, 2010 8:56:50 AM

Page 1 of 1

All amounts are calculated in domestic currency.

All Vendors PO ID PO11060 Receipt Dates from 1/1/2010 to 1/1/2010 All Line Item Types
All Item ID/GL/WOs All Rec. Employees All Currencies
Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name		VC-MAG002	Magna Stainless								
PO11060	2		M6061T6B00750X00 f		1/11/2010	1/11/2010	80.0000	\$0.25	0.0000	0	\$20.00
CAD	No		6061-T6 Bar .750 x f		80.0000	Stores		\$20.00	0.0000	0	
			.125								
			113608								
	3		M6061T6B2.000X01. f		1/11/2010	1/11/2010	40.0000	\$11.08	0.0000	0	\$443.20
	No		6061-T6 Bar 2.00 x f		24.0000	Stores		\$443.20	0.0000	0	
			.125								
			113608								
	4		M6061T6S.125 sf		1/11/2010	1/11/2010	96.0000	\$5.94	0.0000	0	\$570.00
	No		6061-T6 .125 Sheet sf		96.0000	Stores		\$570.00	0.0000	0	
			113608								
	5		M6061T6S.063 sf		1/11/2010	1/11/2010	288.0000	\$4.53	0.0000	0	\$1,304.99
	No		6061-T6 .063 Sheet sf		256.0000	Stores		\$1,304.99	0.0000	0	
			113608								

Total Received Quantity:	504.0000
Total Qty to Inspect (PO U/M):	0.0000
Total Reject Quantity:	0.0000
Total Receipt Value:	\$2,338.19
Total Balance Due Quantity:	0.0000



Magna Stainless

5775 Kieran St, Saint-Laurent QC H4S 0A3
Phone: (514) 339-1211 Watts: 1-800-363-6646 Fax: (514) 339-1105

INVOICE

Pg 1 of 1 I021555

SOLD TO:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY , ON
K6A 1K7

SHIP TO:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY , ON
K6A 1K7

MTR:Y

INVOICE DATE:	01/11/10
ORDER DATE:	01/07/10
SHIP DATE:	01/11/10
ORDER NUMBER:	W023590
PURCHASE ORDER:	PO11060

Currency		Sales Person		Ship Via		F.O.B.		Terms	
CANADIAN DOLLARS		ERYCK BLAIS		NIR:R-557065-1		PREPAID		NET 30 DAYS	
Ln	Back Ordered	Ordered	Unit	Description		Shipped		Price Per	Value
				ALUMINUM FLATS					
		4	PC	AFL 6061 T6 1/8" x 3/4" x R/L		4	UN	5.00	20.00
				L026372 20' 4 PC/9 LB					
		2	PC	AFL 6061 T6 1-1/4" x 2" x R/L		2	UN	133.00	266.00
				L030399 20' 2 PC/118 LB					
				ALUMINUM SHEET					
		3	PC	ASH 6061 T6 .125" x 48" x 96"		3	UN	190.00	570.00
				L031565 3 PC/173 LB					
		6	PC	ASH 6061 T6 .063" x 48" x 144"		288.00	SFT	4.5312	1,304.99
				L025694 6 PC/261 LB					
				NO N/A MAT'L					
RECEIVED JAN 18 2010									

RECEIVED JAN 18 2010

01/12/10 10:47:24

PST Exmp No:EXEMPT

Merchandise:	2,160.99
Surcharges:	
No Tax Costs:	
GST	108.05
Total Due:	2,269.04

Title to the goods sent out on this invoice remains with Magna Stainless Div of CSM ULC until such time as this invoice has been paid in full. Unless otherwise noted terms are 30 days. Interest accrues on all overdue accounts at the rate of 1.5% per month compounded monthly.

Q.S.T. # 1213236471
G.S.T. # 881565899 RT0001

Receiving Report

Date: 10/01/11
Supplier: MAGNO

Batch No: M/13608
Dart P/O: 11060

Packing Slip: Yes ☒ No ☐
Invoice: Yes ☐ No ☒
Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
Waybill Attached: Yes ☐ No ☒ N/A ☐
Shipment Complete: Yes ☒ No ☐ N/A ☒
QC6 Inspection ☒ S ☐ N/A ☒
Work Order 1 10/01/11 N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12

Production/Admin:
Date: 10/01/11
Received/Costing:
Initial:

Location

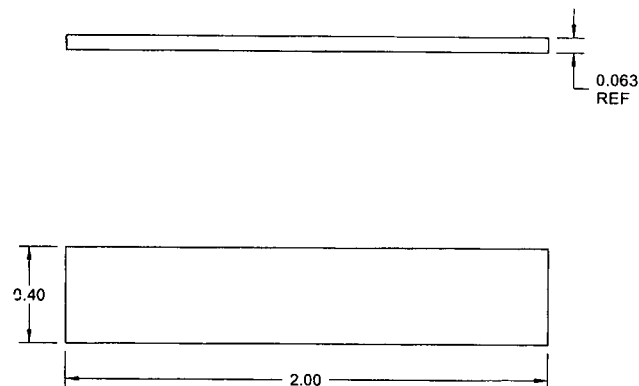
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

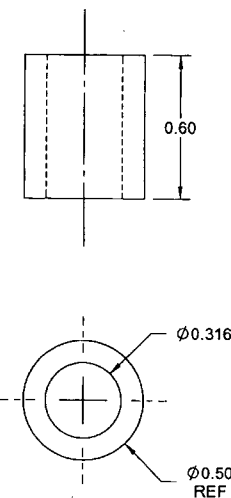
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4107-5 SPACER



D4107-7 BALL STUD SPACER

NOTES:

- 1) MATERIAL -5: 6061-T6/T62 ALUMINUM SHEET, 0.063 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S063
OR
ALUMINUM 2024-T3 SHEET 0.063 THICK
PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS4037 OR ASTM B209
REF DART SPEC M2024T3S.063
-7: 303/304/316 STAINLESS STEEL ROUND BAR ϕ 0.50, PER ASTM A276 OR ASTM A582
PER DART SPEC M303R0.500 OR M304R0.500
- 2) FINISH -5: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-7: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENT P/N D4107-X & B/N PER QSI 044.
- 7) WEIGHT -5: < 0.01 lbs
-7: 0.03 lbs

#62298

RELEASED
2010-09-23

DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4107	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		DOUBLER & SPACERS	NTS
DATE	10.07.15	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

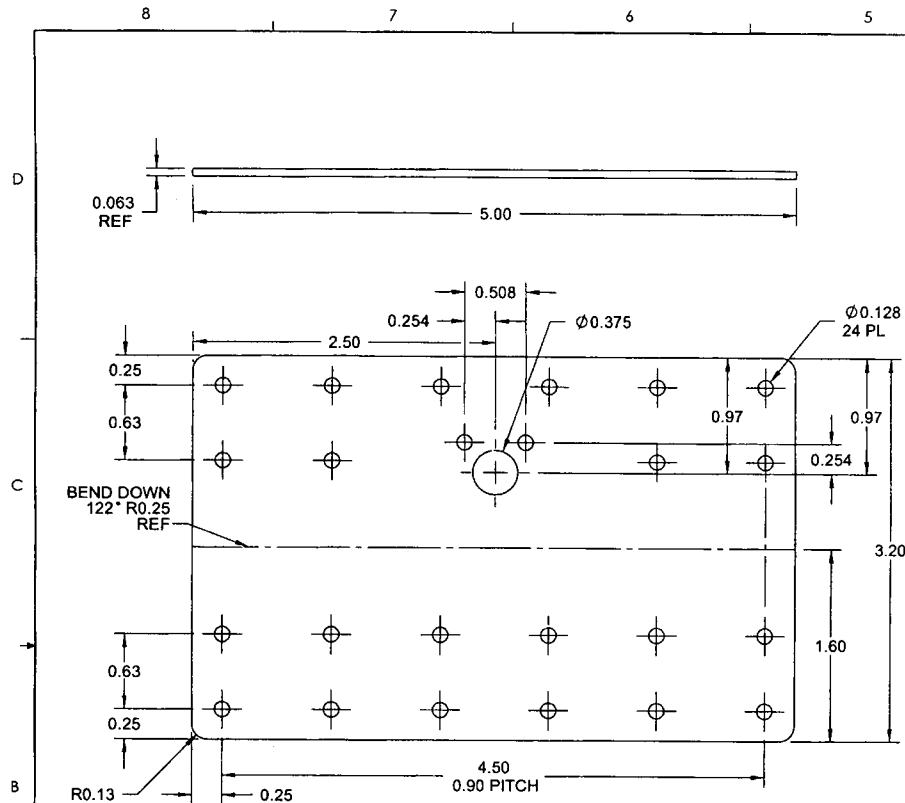
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

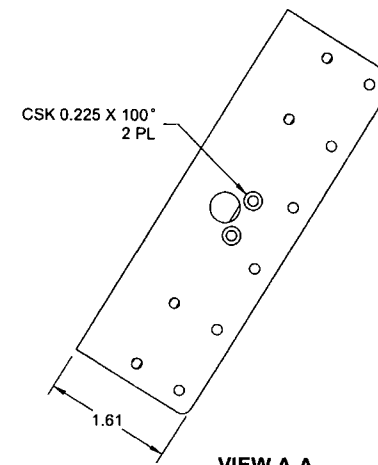
NOTE: Date & initial all entries



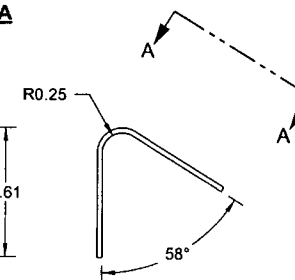
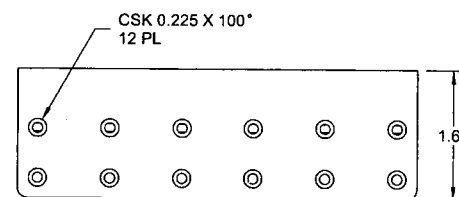
D4107-1F FLAT PATTERN, DOOR DOUBLER

NOTES:

- 1) MATERIAL -1F: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.063 THK
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
PER DART SPEC M304S16GA OR M303S16GA
-1: MAKE FROM D4107-1F.
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION -1: IDENT P/N D4107-1 & B/N PER QSI 044 6.1
- 7) WEIGHT: 0.27 lbs







VIEW A-A



**D4107-1 DOOR DOUBLER
(MAKE FROM D4107-1F)**

RELEASED
2010-09-23

DESIGN	JPH	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4107	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		DOUBLER & SPACERS	NTS
DATE	10.07.15	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

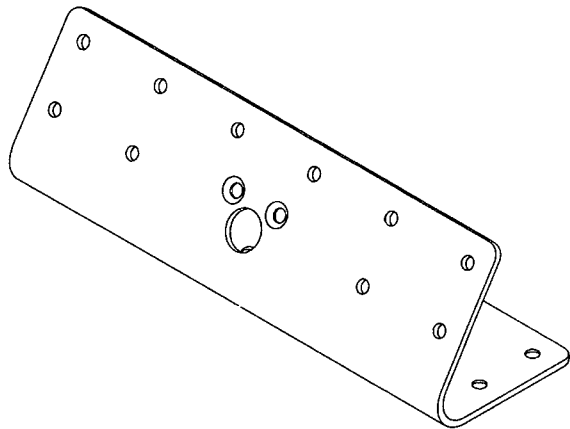
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

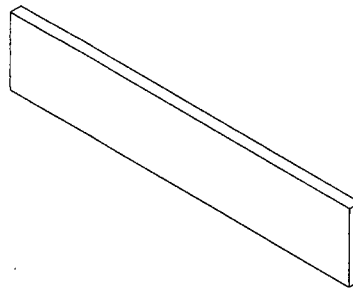
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

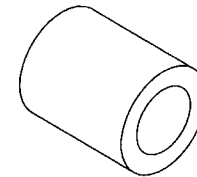
#62298



D4107-1 DOOR DOUBLER



D4107-5 SPACER



D4107-7 BALL STUD SPACER

RELEASED
2010-09-23

A	NEW ISSUE	JPH	10.07.15
REV.	DESCRIPTION	BY	DATE
DESIGN	JPH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	JPH		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4107	SHEET 1 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.		DOUBLER & SPACERS	NTS
DATE	10.07.15	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, September 24, 2010 3:24:31 PM

Page 1

Work Order ID: 62298

Parent Item: D4107-5

Parent Item Name: Spacer





Start Date: 9/27/2010

Required Date: 10/4/2010

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP Rev:A 10.09.24 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063 		Purchased	No			100	sf	82.6840	0.0055	0.017368	.1		
6061-T6 .063 Sheet													

1810-9-27

Location

Loc Qty

Loc Code

MAT21

82.684

113608

82.684

113608

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 62298

Friday, September 24, 2010 3:24:31 PM

Page 3

Item ID: D4107-5

Accept

Setup Start

Revision ID:

Stop

Item Name: Spacer

Start Date: 9/27/2010 Start Qty: 3.00

Cust Item ID:

Required Date: 10/4/2010 Req'd Qty: 3.00

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Identify as per dwg & Stock Location: 129

0.00



Packaging

Memo

PPP 62779

0.00

Packaging

2x

10.10.12 (6)

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10.10.12

BS 10-10-15 (6)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

* NOTE: Date & initial all entries

Work Order ID 62298

Friday, September 24, 2010 3:24:31 PM



Page 2

Item ID: D4107-5	Accept		Setup	Start	
Revision ID:				Stop	
Item Name: Spacer					
Start Date: 9/27/2010	Start Qty: 3.00		Cust Item ID:		
Required Date: 10/4/2010	Req'd Qty: 3.00		Customer:		
Reference:					

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00							
130 HandFinish Hand Finishing	Chemical Conversion Coater QS1005 4.1 Memo	0.00 0.00							
140 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							

8/10/12/26

BK 10-9-29

=> 10/09/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

* NOTE: Date & initial all entries

1. The first step in the process is to identify the problem. This involves gathering information about the situation and the people involved.

2. The second step is to analyze the problem. This involves breaking the problem down into smaller parts and identifying the causes.

3. The third step is to develop a plan. This involves deciding on the best way to solve the problem and setting goals.

4. The fourth step is to implement the plan. This involves putting the plan into action and monitoring progress.

5. The fifth step is to evaluate the results. This involves checking to see if the problem has been solved and if the goals have been met.

6. The sixth step is to reflect on the process. This involves thinking about what worked well and what could be improved.

7. The seventh step is to share the results. This involves telling others about what you have learned and how you solved the problem.

8. The eighth step is to continue to learn. This involves staying open to new ideas and ways of solving problems.

9. The ninth step is to be a good team player. This involves working well with others and helping them solve their problems.

10. The tenth step is to be a good leader. This involves helping others to solve their problems and leading them to success.

Page 1

Accept

**Setup Start**

Stop

**Cust Item ID:**

THE UNIVERSITY OF CHICAGO

Customer:

Run Start

Date: 10-9-24 Tooling:

Date:

Date: _____ **SPC (Y/N):** _____

Date:

Stop

**Insp.
Stamp**

Revision Nbr

D4107

A

0.00

0.00

[illegible]

Waterjet

FLOW CNC Waterjet

6061 . 063

Memo

1-Cut as per Dwg

Dwg Rev: A

Prog Rev: _____

2-Deburr if necessary

SD 10/09/28

10-4-27

110

QC2- Inspect parts off machine FAI/FAIB

0.00

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

QC

Quality Control

Memo

0.00

1B10-9-27

MATERIAL CERTIFICATION

REQ'D UPON DELIVERY

02/09/29